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## THE CROSSBILLS.

BY WM. L. KELLS, LISTOWEL, ONT., CANADA.

The genus *Loxia* is one of the many sub-divisions into which the family *Fringillidæ* is divided. This genus is represented among Canadian birds by two species; viz., the American Crossbill (*Loxia curvirostra minor*) and the White-winged Crossbill (*Loxia leucoptera*). These are both northern species, whose plumage and habits differ little and who are seldom seen in central Ontario except in the winter season; but during that period small flocks of them move much further south, and in the mountain regions of the far west they are reported as observed, at most seasons of the year, as far south as Colorado, but at any time seem comparatively rare in Alaska.

The Crossbills receive their general name from the peculiar form of their bill, the upper mandible of which crosses the lower in an apparently distorted manner, but which in reality wonderfully assists them in procuring their food, which is chiefly the seeds of the evergreen. These birds are also known to nest in the winter season.

## THE AMERICAN CROSSBILL.

*Loxia Curvirostra Minor.*

This species, also called the Red Crossbill, is one of those birds that usually make their appearance in Ontario with the first heavy snow-fall in the beginning of the winter season, though occasionally small wandering flocks have been observed at other times.

The Red Crossbill is about six inches in length. The plumage of the male, when it attains maturity, is generally of a beautiful reddish hue, varied with brown, the wings and tail being blackish. The plumage of the female is of a brownish-olive, variously marked with other dusky hues; the markings on the rump are of a saffron color. The mandibles of the beak cross each other, sometimes on one side and sometimes on the other.

Some winters these birds appear in large numbers in some localities and, again, years may pass away and none of them be seen. Their appearance, however, is mostly regulated by their food supply, and the observations of years leads to the conclusion that in tracts

of evergreen woods, where their food is annually supplied, their advent may be looked for regularly, year after year, though the number of the visitors may vary, and in such places, even in the coldest weather, their appearance and their notes form a pleasing feature in the bird-life of the then melancholy woodland scenery; but outside of such scenes these birds are seldom heard or seen, yet in the early days of the pioneer life of backwoods settle, these birds have been noticed to alight in a quite familiar manner, and pick up scraps of food at the door of the log shanty and amongst the litter of the farm-yard. But times have changed, and with them to some extent, the habits and nesting places of the Crossbills. Among or towards the top of the evergreens, in the deep, wild woods, and in the depths of the winter season, these birds are now chiefly to be observed in this country, and here, where they are seldom disturbed by man or the sound of the human voice, they pass this period of their existence in one continual serenade, chattering and feeding. When disturbed, or on the impulse of the moment at the signal of the leader, they rise in a body and vanish over the tree-tops like a cloud of smoke.

The Crossbills feed chiefly on the seeds of the evergreens, especially those of the pines and hemlocks, which they extract from the cones in a very dexterous manner by means of their bills, assisted by their still more curious tongue. The muscles that move the bill are very strong and act upon the two portions latterly; *i. e.*, sideways, and by this means separate the scales from the sides of the cone and thus expose the seeds or pips in the interior recesses. They will even split open large fruit in order to get at the seeds in the center. The manner in which the bills of this species are crossed, was when first noticed thought to be an accidental distortion; but on more careful examination it proved to be another of the wise provisions of Providence, to assist its possessor in securing food.

When feeding, these birds living about in the branches in every possible position, for while some are on the upper parts of the bough, others are clinging to the sides, and others again, with back and head downward, swing to and fro in the wintry blasts. When they first arrive in this country, they appear to be almost fearless of human presence; but if shot at a few times and some of their number taken, the rest of the flock become more timid and fly off on the first apprehension of danger.

The nesting habits of this species are very little known, although

much attention has of late years been directed to the subject. Some years ago its nest was taken in this vicinity and I have seen specimens of the eggs that were collected about eight miles south of this town. All efforts on my part to discover its nest and procure its eggs have failed ; but it is an established fact that it nests in the winter season.

The most accurate information that I have obtained on the nesting habits of this species has been furnished by Dr. Jarnier of Lucknow, a station some thirty miles to the westward of this town. From his article on the "Red Crossbill" published in the *Canadian Naturalist and Sportsmen*, I here make a few extracts : "About twenty years ago the above species was a common resident in this vicinity. During the months of December and January they gathered in small flocks and commenced to pair." "Everyone is familiar with the peculiar flight of the Yellow-bird (*Spinus tristis*) and exactly in a similar manner the Red Crossbill spreads its wings and tail, and flies in a fantastic manner on summer days. The female, in the meantime, may be seen perched on some neighboring sprig or prominent place seeming to enjoy the gambols of the male. Early in the morning, they betake themselves to the hemlock, pine or tamarac ridges, and may be seen at all altitudes and in all positions on the cones in search of food ; sometimes head downwards, or holding with claws and bill directly beneath the cones, and tearing the seed from its covering with much ease."

"The nests are generally placed near the extremity of a hemlock or cedar branch, and are large and very thick for the size of the builder. These are variously lined with bits of small roots, fibres of vegetables, hair, feathers and the like ; but of course vegetable fibres predominate. I have frequently seen the head and a little portion of the tail of the bird project over the side of the nest, when on, or nearly on a level, but never from below. Although I saw numbers of the nests, I never obtained any of the eggs. The fact is, I never tried, as the thought did not at the time occur to me."

"These birds breed early in March, or towards the end of January, and during February. I am unable to state exactly how many eggs they lay, or the period of incubation. On the 24th of March, 1862, I saw a female Crossbill feeding her young ; there were four of them closely huddled together on a maple twig. I shot three of them, the fourth and the old bird escaping, seemingly unhurt. I carefully ex-

amined the young ; they were a greenish-brown color, and there was down on the ends of their feathers, especially on the head and back. The tail was more than half grown, and the flight of the young bird that escaped seemed very strong. The bills of the young were not in the least crossed, and this proves that the beaks take this form as they arrive at maturity ; the appearance was like that of any young Finch. It strikes me that their bills were too tender to procure food, and that the parents fed them for a longer period than is usual in the Finch family. But since that time the axe has done its work. We find no more of this species in this neighborhood, as it has little to feed on."

"The nest is, as has been stated, very thick, compact and large ; nature has taught the bird so to construct it, as otherwise the eggs and young would be frozen. The crops of the three young procured were quite distended with hemlock seed. The external covering in every case was removed and each seed was bruised and covered with a peculiar or glutinous fluid, either so given by the old birds or produced in the crop of the young ones, perhaps as in parent Parrots."

"It seems remarkable that Crossbills should breed so early in the year. It is not at all strange in any of these months to see the thermometer frequently below zero. Their food is at this time abundant and continues so until summer, and it seems improbable that food supply is the cause of such early incubation."

The eggs of this species are of a greenish-white hue, spotted towards the large end with purple and lilac.

#### THE WHITE-WINGED CROSSBILL.

##### *Loxia Leucoptera.*

In size, form, plumage and general habits, this species differs but little from the more common Red Crossbill, and its nest is stated to be much similar. Like its congeners it is chiefly a winter visitant in this country, and seldom observed except in severe cold weather, and then in isolated parties ; nor does it associate in any way with the other species of Crossbill. It appears to make its general home in the desolate evergreen woods of more northern latitudes extending from Maine towards the Rocky Mountains, and has been observed in Alaska. In winter and early spring it is commonly met with in

Manitoba and other north-western portions of the Canadian Dominion, and some nests have been found in northern New England.



WHITE-WINGED CROSSBILL.

The chief difference between it and the Red Crossbill is that the wings are crossed with bars of a white color.

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## SPARROWS AND WARBLERS.

BY WILL. N. COLTON, BIDDEFORD, MAINE.

Sweet bird ! thy bower is ever green,  
 Thy sky is ever clear ;  
 Thou hast no sorrow in thy note,  
 No winter in thy year.

—*Logan.*

How well this applies to that beautiful fleeting family, *Mniotiltidae* the Wood Warblers ! Only with us a comparatively short time each year, they yet endear themselves, cheering us as no other bird can. They do not flit around our door-yards ; but have to be visited in their own haunts, the forest and swamp, and here we can see them in unrestrained freedom.

That which is hardest to obtain, we prize most, and it will pay anyone for a tiresome tramp, to have the opportunity of watching and studying the rarer Warblers, with their gay, restless movements, seldom still ten seconds at a time, flitting from twig to twig. The more common species are often found in orchards and near to man ; but they have more subdued tints and of a more timid air than their wilder brethren.

My purpose is especially, to speak of the Blue Yellow-backed Warbler, as a good representative of his family. How he “tweats” and warbles his simple lay ! There is certainly “no sorrow in his